

Title (en)
IMPROVED PROCESS AND CATALYST STRUCTURE EMPLOYING INTEGRAL HEAT EXCHANGE WITH OPTIONAL DOWNSTREAM FLAMEHOLDER

Title (de)
VERBESSERTE VERFAHREN UND KATALYTISCHE, STRUKTUR, BENUTZEND INTEGRALEN WÄRMEAUSTAUSCH MIT WAHLWEISE VORGESCHALTETEM FLAMMENHALTER

Title (fr)
PROCEDE ET STRUCTURE CATALYTIQUES AMELIORES ASSURANT UN ECHANGE THERMIQUE INTEGRAL AVEC EVENTUELLEMENT UNE FLAMME ENTRETENUE EN AVAL

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Application
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Abstract (en)
[origin: WO9523915A1] The invention is an improved catalyst structure and its use in highly exothermic processes like catalyst combustion. This improved catalyst structure employed integral heat exchange in an array of longitudinally disposed, adjacent reaction passage-ways or channels, which are either catalyst-coated (14) or catalyst-free (16), wherein the configuration of the catalyst-coated channels (14) differ from the non-catalyst channels (16) such that, when applied in exothermic reaction processes, such as catalyst combustion, the desired reaction is promoted in the catalytic channels (14) and substantially limited in the non-catalytic channels (16). The invention further comprises an improved reaction system and process for combustion of a fuel wherein catalytic combustion using a catalyst structure employing integral heat exchange, preferably the improved structures of the invention, affords a partially-combusted, gaseous product which is passed to a homogeneous combustion zone where complete combustion is promoted by means of a flameholder.

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